

Amendments to the Claims:

Please replace all prior claims versions and listings with the following:

Listing of Claims:

1. (currently amended) A method for providing a barrier coating on a porous ceramic article which comprises the steps of:

applying to the porous ceramic article a polymer solution or dispersion comprising a liquid vehicle, a cross-link promoter and a water-soluble, thermally cross-linkable, thermally pyrolyzable hydrocarbon polymer selected from the group consisting of amine-functional ionene polymers, polyvinyl alcohol, polyacrylic acid, and polyacrylic amine; and

heating the ceramic article to a temperature sufficient to substantially remove the vehicle from the applied solution or dispersion and to effect cross-linking of the hydrocarbon polymer.

2. (canceled)

3. (currently amended) A method in accordance with claim 1 wherein the cross-linkable, thermally pyrolyzable hydrocarbon polymer is an amine functional ionene polymer having a molecular weight in the range of 5000–200,000.

4. (original) A method in accordance with claim 3 wherein the cross-link promoter is selected from the group consisting of epichlorohydrin and diamines.

5. (original) A method in accordance with claim 3 wherein the ceramic article is heated to a temperature in the range of 80-120°C. to effect cross-linking of the hydrocarbon polymer.

6. (original) A method for applying a catalyst or catalyst washcoat to a ceramic catalyst support comprising the steps of:

applying to the catalyst support a polymer solution or dispersion comprising a liquid vehicle, a cross-link promoter, and a thermally cross-linkable, thermally pyrolyzable hydrocarbon polymer;

heating the ceramic article to a temperature sufficient to substantially remove the vehicle from the applied solution or dispersion and to effect cross-linking of the hydrocarbon polymer to thereby provide a polymer-coated support;

applying to the polymer-coated support an aqueous washcoating or catalyst coating and drying the coating or washcoating to provide a catalyst-coated or washcoated support; and

heating the catalyst-coated or washcoated support to a temperature at least sufficient to remove the cross-linked polymer coating.

7. (original) A method in accordance with claim 6 wherein the porous ceramic substrate is a ceramic honeycomb having a principal crystalline phase selected from the group consisting of aluminum titanate and cordierite.

8. (original) A method in accordance with claim 6 wherein the aqueous washcoating or catalyst coating comprises a dispersion of alumina, alumina precursors, or mixtures containing alumina.

9-11 (canceled)